

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/24/97

Date Received: 11/13/97

Project: Metro Self Monitor, PO#M59089

Date Samples Extracted: 11/18/97

Date Extracts Analyzed: 11/19/97

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE
FOR CHROMIUM, COPPER, NICKEL, ZINC**

USING METHOD 6010

Samples Processed Using Method 3005A

Results Reported as mg/L (ppm)

<u>Sample ID</u>	<u>Chromium</u>	<u>Copper</u>	<u>Nickel</u>	<u>Zinc</u>
M59089	0.32	0.37	0.28	0.10
Method Blank	<0.05	<0.05	<0.05	<0.05

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QUALITY ASSURANCE RESULTS FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 711044-01 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	0.32	0.33	3	0-20
Copper	mg/L (ppm)	0.37	0.35	6	0-20
Nickel	mg/L (ppm)	0.28	0.30	7	0-20
Zinc	mg/L (ppm)	0.10	0.12	18a	0-20

Laboratory Code: 711044-01 (Matrix Spike)

Analyte:	Reporting Units	Spike Level	Sample Result	% Recovery MS	% Recovery MSD	Acceptance Criteria	Relative Percent Difference
Chromium	mg/L (ppm)	5	0.32	91	99	80-120	8
Copper	mg/L (ppm)	5	0.37	97	98	80-120	1
Nickel	mg/L (ppm)	10	0.28	98	105	80-120	7
Zinc	mg/L (ppm)	5	0.10	98	111	80-120	12

Laboratory Code: LCS

Analyte:	Reporting Units	Spike Level	% Recovery MS	% Recovery MSD	Acceptance Criteria	Relative Percent Difference
Chromium	mg/L (ppm)	5	108	109	80-120	1
Copper	mg/L (ppm)	5	107	109	80-120	2
Nickel	mg/L (ppm)	10	116	119	80-120	3
Zinc	mg/L (ppm)	5	124vo	122vo	80-120	2

a - The analyte was detected at a level less than five times the detection limit. The RPD results may not provide reliable information on the variability of the analysis.

vo - The value reported fell outside the acceptance criteria established for this analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Jensen, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
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FAX: (206) 283-5044
e-mail: fbi@isomedia.com

November 24, 1997

DUPLICATE COPY

INVOICE # 97ACU1123-2

Accounts Payable
Alaskan Copper Works
628 South Hanford St.
Seattle, WA 98134

RE: Project Metro Self Monitor, PO#M59089: Results of testing requested
by Gerry Thompson for material submitted on November 13, 1997.

1 water sample analyzed for
Chromium, Copper, Nickel, and Zinc
using Method 6010 @ \$65 per sample

\$ 65.00

Amount Due

\$ 65.00

FEDERAL TAX ID # (b) (6)

DJ# 711044 KJ AI
11.13.97

11.13.97

Send Report To: Alaskan Copper Works Contact Genel Thompson
Company 228 Hanover St
Address City, State, Zip Seattle WA 98104
Phone # (206) 382-8329 FAX # (206) 382-4309 Date 11-13-97

[illegible]FORMS/COC

06/09/97

AKC-0011227

FRIEDMAN & BRUYA, INC.

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November 24, 1997

Gerry Thompson, Project Manager
Alaskan Copper Works
628 South Hanford St.
Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on November 13, 1997 from your Metro Self Monitor, PO#M59089 project. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

A handwritten signature in black ink, appearing to be 'Kurt Johnson', with a long horizontal line extending to the right.

Kurt Johnson
Chemist

Enclosures
ACU1123R.DOC